Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus comprising:

a plasma produced ~~light~~ electromagnetic radiation source;

one or more collector optics; and

a magnetic field generator operative to generate a magnetic field around the one or more collector optics, the magnetic field generator comprising windings around a non-reflective surface in the one or more collector optics.

2. (Original) The apparatus of claim 1, wherein the windings comprise at least one of a wire, a bump, and an electret fiber.

3. (Previously Presented) The apparatus of claim 1, further comprising a potential difference between the windings and the non-reflective surface.

4. (Original) The apparatus of claim 1, wherein the collector optics comprise a plurality of nested shells, the shells including reflective surfaces and non-reflective surfaces.

5. (Previously Presented) The apparatus of claim 4, wherein the magnetic field generator comprises a current supply connected to one or more of the nested shells and operative to provide a current along a length of said one or more nested shells.

6. (Previously Presented) The apparatus of claim 4, wherein the magnetic field generator comprises a voltage supply connected between a reflective side and a non-reflective side of one or more of said nested shells.

7. (Original) The apparatus of claim 4, wherein the magnetic field generator comprises:

a first additional shell around the collector optics;

a second additional shell inside the nested shells in the collector optics; and

a voltage supply operative to provide a potential difference between the first additional shell and the second additional shell.

8. (Original) The apparatus of claim 1, further comprising:

a plurality of foil traps between the source and the collector optics.

9. (Currently Amended) The apparatus of claim 1, wherein the ~~light~~ electromagnetic radiation source comprises an extreme-ultraviolet (EUV) ~~light~~ electromagnetic radiation source.

10. (Currently Amended) An apparatus comprising:

a plasma produced ~~light~~ electromagnetic radiation source;

one or more collector optics; and

a magnetic field generator operative to generate a magnetic field around the one or more collector optics, the magnetic field generator comprising a solenoid structure ~~adjacent~~ wrapped around a ~~non-reflective~~ reflective surface in the one or more collector optics.

11. (Currently Amended) The apparatus of claim 10, wherein the ~~light~~ electromagnetic radiation source comprises an extreme-ultraviolet (EUV) ~~light~~ electromagnetic radiation source.

12. (Original) The apparatus of claim 10, further comprising: a plurality of foil traps between the source and the collector optics.

13. (Currently Amended) A method comprising:

generating a magnetic field around collector optics in a lithography system with windings around a non-reflective surface in the collector optics; and

deflecting debris particles generated by a plasma producing ~~light~~ electromagnetic radiation source from a reflective surface in the collector optics.

14. (Previously Presented) The method of claim 13, wherein deflecting the debris particles comprises deflecting the debris particles toward a non-reflective surface in the collector optics.

15. (Original) The method of claim 13, wherein the windings comprise at least one of a wire, a bump, and an electret fiber.

16. (Previously Presented) The method of claim 13, further comprising introducing a potential difference between the windings and the non-reflective surface.

17. (Original) The method of claim 13, wherein the collector optics comprise a plurality of nested shells, the shells including a reflective surface and a non-reflective surface.

18. (Previously Presented) The method of claim 17, wherein deflecting the debris particles comprises deflecting the debris particles from a reflective side of one shell to the non-reflective surface of an adjacent shell.

19. (Previously Presented) The method of claim 17, wherein generating the magnetic field comprises providing a current along a length of each of said nested shells.

20. (Previously Presented) The method of claim 17, wherein generating the magnetic field comprises introducing a potential difference between the reflective side and the non-reflective side of each nested shell.

21. (Previously Presented) The method of claim 17, wherein generating the magnetic field comprises introducing a potential difference between a first additional shell around the collector optics and a second additional shell inside the nested shells in the collector optics.

22. (Original) The method of claim 13, further comprising: capturing debris particles with foil traps between the source and the collector optics.

23. (Original) The method of claim 13, wherein the lithography system comprises an Extreme Ultraviolet (EUV) lithography system.

24. (Currently Amended) A method comprising:

generating a magnetic field around collector optics in a lithography system with a solenoid structure ~~adjacent~~ wrapped around a ~~non-reflective~~ reflective surface in the collector optics; and

deflecting debris particles generated by a plasma producing ~~light~~ electromagnetic radiation source from [[a]] the reflective surface in the collector optics.

25. (Previously Presented) The method of claim 24, further comprising capturing debris particles with foil traps between the source and the collector optics.

26. (Original) The method of claim 24, wherein the lithography system comprises an Extreme Ultraviolet (EUV) lithography system.

27. (New) The apparatus of claim 1, wherein the magnetic field generator comprising windings wrapped around an outside of the one or more collector optics.

28. (New) The apparatus of claim 10, wherein the magnetic field generator is configured to generate a magnetic field having a magnitude and a direction effective to deflect a majority the charged species generated by the source of electromagnetic radiation.

29. (New) The apparatus of claim 28, wherein the magnetic field generator is configured to generate a magnetic field having a magnitude and a direction effective to deflect a single charge Xe ion having an energy of 640 eV.